

Form PTO-1449  
(REV. 8-83)US Dept. of Commerce  
PATENT & TRADEMARK OFFICEATTY DOCKET NO.  
JAO 40499APPLICATION NO.  
09/077,029

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT(S)  
Mutsumi KIMURA et al.FILING DATE  
May 18, 1998GROUP  
2164

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT NUMBER | DATE     | NAME             | CLASS | SUB<br>CLASS |
|---------------------|-----------------|----------|------------------|-------|--------------|
| AS                  | 6,013,982       | 01/11/00 | THOMPSON et al.  | 313   | 506          |
| AS                  | 5,895,692       | 04/20/99 | SHIRASAKI et al. | 427   | 557          |
| AS                  | 5,576,070       | 11/19/96 | YANIV            |       |              |
| AS                  | Re. 36,711      | 05/23/00 | YANIV            |       |              |
| AS                  | 6,087,196       | 07/11/00 | STURM et al.     |       |              |

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| JP-A-5-258860   | 10/08/93 | Japan   |       |              |
| JP-A-7-169567   | 07/04/95 | Japan   |       |              |
| JP-A-7-235378   | 09/05/95 | Japan   |       |              |
| JP-A-7-294016   | 11/10/95 | Japan   |       |              |
| JP-B2-5-78655   | 10/29/93 | Japan   |       |              |
| JP-A-10-12377   | 01/16/98 | Japan   |       |              |

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| KIDO, J. et al., "White Light-Emitting Organic Electroluminescent Devices Using the Poly (N-vinylcarbazole) Emitter Layer Doped with Three Fluorescent Dyes", <i>Appl. Phys. Lett.</i> , 64 (7), February 14, 1994, pp. 815-817. |
| ADACHI, Chihaya et al., "Electroluminescent Device of Organic Thin Films", <i>IEICE Technical Report</i> , Vol. 89, No. 106, June 23, 1989, pp. 49-50.   |

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Andrew S. Leichter

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|---------------------|-----------------|----------|-----------------|-------|--------------|
| AJ                  | 5,665,857       | 09/09/97 | SHI             | 528   | 373          |
| AS                  | 5,540,999       | 07/30/96 | YAMAMOTO et al. | 428   | 411.1        |
| AJ                  | 5,821,002       | 10/13/98 | OHNISHI et al.  | 428   | 690          |
| AS                  | 6,008,828       | 12/28/99 | FURUKI et al.   | 347   | 139          |
| AJ                  | 5,281,489       | 01/25/94 | MORI et al.     | 428   | 690          |
| AS                  | 4,569,305       | 02/11/86 | FERRI et al.    |       |              |
| AJ                  | 4,687,352       | 08/18/87 | IGI et al.      |       |              |
| AS                  | 4,792,817       | 12/20/88 | BARNEY          |       |              |
| AS                  | 5,534,716       | 07/09/96 | TAKEMURA        |       |              |
| AJ                  | 5,645,901       | 07/08/97 | FUKUCHI et al.  |       |              |
| AS                  | 5,728,626       | 03/17/98 | ALLMAN et al.   |       |              |
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| AS                  | 5,757,453       | 05/26/98 | SHIN et al.     |       |              |
| AJ                  | 5,759,268       | 06/02/98 | BEGIN et al.    |       |              |
| AS                  | 5,770,260       | 06/23/98 | FUKUYAMA et al. |       |              |
| AJ                  | 5,779,799       | 07/14/98 | DAVIS           |       |              |
| AJ                  | 5,784,132       | 07/21/98 | HASHIMOTO       |       |              |
| AJ                  | 5,989,945       | 11/23/99 | YUDASAKA et al. | 438   | 149          |
| AS                  | 5,656,826       | 08/12/97 | MISAWA et al.   | 257   | 72           |
|                     | 09/901,095      | 07/10/01 | KIMURA et al.   |       |              |
|                     | 09/901,096      | 07/10/01 | KIGUCHI et al.  |       |              |
|                     | 09/901,126      | 07/10/01 | YUDASAKA et al. |       |              |

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## FOREIGN PATENT DOCUMENTS

|  | DOCUMENT NUMBER                       | DATE     | COUNTRY | CLASS | SUB CLASS |
|--|---------------------------------------|----------|---------|-------|-----------|
|  | JP-A-3-102324                         | 04/26/91 | Japan   |       |           |
|  | JP-A-3-126921                         | 05/30/91 | Japan   |       |           |
|  | JP-A-4-253033                         | 09/08/92 | Japan   |       |           |
|  | JP-A-5-105486                         | 04/27/93 | Japan   |       |           |
|  | JP-A-5-116941                         | 05/14/93 | Japan   |       |           |
|  | JP-A-6-204168                         | 07/22/94 | Japan   |       |           |
|  | JP-A-62-223727                        | 10/01/87 | Japan   |       |           |
|  | JP-A-6-281958                         | 10/07/94 | Japan   |       |           |
|  | JP-A-61-78165                         | 04/21/86 | Japan   |       |           |
|  | JP-A-7-122475                         | 05/12/95 | Japan   |       |           |
|  | JP-A-8-1065                           | 01/09/96 | Japan   |       |           |
|  | JP-A-8-32085                          | 02/02/96 | Japan   |       |           |
|  | JP-A-10-12377 (w/English translation) | 01/16/98 | Japan   |       |           |
|  | EP 0 756 932 A2                       | 02/05/97 | Europe  |       |           |
|  | WO 90/13148                           | 11/01/90 | WIPO    |       |           |
|  | WO 95/01871                           | 01/19/95 | WIPO    |       |           |
|  | WO 98/32783                           | 07/30/98 | WIPO    |       |           |

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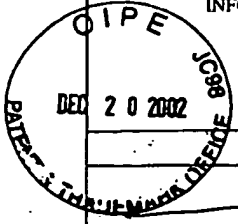
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| Form PTO-1449<br>(REV. 8-83)  |  | US Dept. of Commerce<br>PATENT & TRADEMARK OFFICE  |  | ATTY DOCKET NO.<br>JAO 40499          |  | APPLICATION NO.<br>09/077,029 |  |
| INFORMATION DISCLOSURE STATEMENT<br><br>(Use several sheets if necessary)   |  |  |  | APPLICANT(S)<br>Mutsumi KIMURA et al. |  |                               |  |
|   |  |  |  | FILING DATE<br>May 18, 1998           |  | GROUP<br>2164                 |  |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)  |  |  |  |                                       |  |                               |  |
|   |  | UCHIDA, Masao et al., "Color-Variable Light-Emitting Diode Utilizing Conducting Polymer Containing Fluorescent Dye",<br><i>Jpn. J. Appl. Phys.</i> , Part 2 (1993), 32 (7A), L921-L924 (Chemical Abstract, Vol. 119, No. 16). <span style="float: right;">Not provided AS</span> |  |                                       |  |                               |  |
| EXAMINER <i>Andrew Schuchter</i>  |  |  |  | DATE CONSIDERED <i>8/21/02</i>        |  |                               |  |
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May 18, 1998GROUP  
2164

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| EXAMINER<br>INITIAL | DOCUMENT NUMBER | DATE     | NAME           | CLASS | SUB<br>CLASS |
|---------------------|-----------------|----------|----------------|-------|--------------|
| AS                  | 5,972,419       | 10/26/99 | ROITMAN        |       |              |
|                     | 6,137,221       | 10/24/00 | ROITMAN et al. |       |              |
|                     | 2002/0011783 A1 | 01/31/02 | HOSOKAWA       |       |              |
|                     | 5,652,067       | 07/29/97 | ITO et al.     |       |              |
|                     | 5,472,889       | 12/05/95 | KIM et al.     |       |              |
| AS                  | 5,439,519       | 08/08/95 | SAGO et al.    |       |              |

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|---|----------|---------|-------|--------------|
| AS 0 550 063 A2                         | 07/07/93 | Europe  |       |              |
| AS 0 656 644 A1                         | 06/07/95 | Europe  |       |              |
| AS 0 218 117 A2                         | 04/15/87 | Europe  |       |              |
| AS DE 42 12 501 C1 (w/English abstract) | 08/05/93 | Germany |       |              |
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| AS 0 404 545 A2                         | 12/27/90 | Europe  |       |              |
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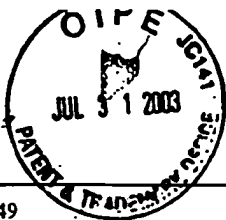
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Mutsumi KIMURA et al.

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May 18, 1998GROUP  
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GROUP 3600

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT NUMBER | DATE    | NAME               | CLASS | SUB<br>CLASS |
|---------------------|-----------------|---------|--------------------|-------|--------------|
| AS                  | 5,041,190       | 08/1991 | DRAKE et al.       | 156   | 647          |
|                     | 5,713,278       | 02/1998 | KAWANO et al.      | 101   | 128.4        |
|                     | 5,742,129       | 04/1998 | NAGAYAMA et al.    | 315   | 167          |
|                     | 5,771,562       | 06/1998 | HARVEY, III et al. | 29    | 592.1        |
|                     | 5,935,331       | 08/1999 | NAKA et al.        | 118   | 319          |
|                     | 5,997,122       | 12/1999 | MORIYAMA et al.    | 347   | 11           |
|                     | 6,195,142 B1    | 02/2001 | GYOTOKU et al.     | 349   | 69           |
| AS                  | 6,187,457 B1    | 02/2001 | ARAI et al.        | 428   | 690          |
|                     |                 |         |                    |       |              |
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|---|--------|---------|-------|--------------|
| JP-A-7-235378 (w/ English<br>Language Abstract and Translation) | 5/1995 | Japan   |       |              |
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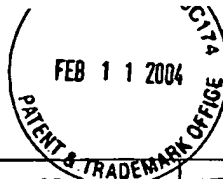
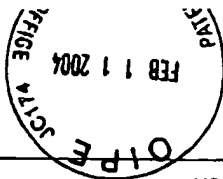
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| AS | "Electroluminescence in Conjugated Polymers;" R. H. Friend, R. W. Gymer, A. B. Holmes, J. H. Burroughes, R. N. Marks, C. Taliani, D. D. C. Bradley, D. A. Dos Santos, J. L. Bredas, M. Logdlund & W. R. Salaneck; Nature, Vol. 397, 14 January 1999. |
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| AD | Fabrication of Organic Light-Emitting Devices, Jennifer Reinig, Junior Physics/Math Major at Drake University, Physics REU: IA State University, Summer 2001   |
| AD | The electroluminescence of organic materials; Ullrich Mitschke and Peter Bauerle, Received 2 <sup>nd</sup> November 1999, Accepted 15 <sup>th</sup> February 2000, Published on the Web 6 <sup>th</sup> June 2000.                                   |

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JAO 40499APPLICATION NO.  
09/077,029

## INFORMATION DISCLOSURE STATEMENT

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APPLICANT(S)  
Mitsumi KIMURA et al.FILING DATE  
May 18, 1998GROUP  
2871

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |   | DOCUMENT NUMBER | DATE       | NAME            | CLASS | SUB<br>CLASS |
|---------------------|---|-----------------|------------|-----------------|-------|--------------|
| AS                  | 1 | 5,438,241       | 08/01/1995 | ZAVRACKY et al. |       |              |
| AS                  | 2 | 5,274,481       | 12/28/1993 | KIM             |       |              |
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|    |   | DOCUMENT NUMBER                   | DATE       | COUNTRY | CLASS | SUB<br>CLASS |
|----|---|-----------------------------------|------------|---------|-------|--------------|
| AS | 3 | JP 3-168613 (w/Eng. Abstr)        | 07/22/1991 | Japan   |       |              |
| AS | 4 | EP 0 486 318 A1                   | 11/15/1991 | Europe  |       |              |
| AS | 5 | DE 196 03 451 A1 (w/Eng. Abstrt)  | 01/31/1995 | Europe  |       |              |
| AS | 6 | JP 6-281917 (w/Eng. Abstrt&Trans) | 02/28/1995 | Japan   |       |              |
| AS | 7 | JP 7-134288 (w/Eng. Abstrt&Trans) | 09/29/1995 | Japan   |       |              |
| AS | 8 | EP 0 665 449 A1                   | 08/02/1995 | Europe  |       |              |
| AS | 9 | JP 59 075205 (w/Eng. Abstr)       | 04/27/1984 | Japan   |       |              |
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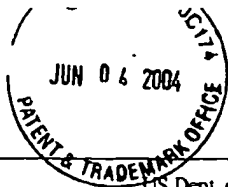
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|  | APPLICANT(S)<br>Mutsumi KIMURA et al. |  |
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## U.S. PATENT DOCUMENTS

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|----|---|------------|---------|-------|--------------|
| AB | 1 JP 03-250583 A (w/Eng. Abst)            | 11/08/1991 | JAPAN   |       |              |
| AB | 2 JP 07-192867 A<br>(w/Eng. Abstrt&Trans) | 07/28/1995 | JAPAN   |       |              |
| AB | 3 JP 08-188658 A<br>(w/Eng. Abstrt&Trans) | 07/23/1996 | JAPAN   |       |              |
| AB | 4 JP 08-188663 A<br>(w/Eng. Abstrt&Trans) | 07/23/1996 | JAPAN   |       |              |
| AB | 5 JP 07-235378 A<br>(w/Eng. Abstrt&Trans) | 09/05/1995 | JAPAN   |       |              |

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| EXAMINER<br><i>Andrew Schetter</i>  | DATE CONSIDERED<br>8/31/04 |
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Date: June 4, 2004



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APPLICANT NO.  
09/077,029

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2871Form PTO-1449  
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JAO 40499

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| EXAMINER<br>INITIAL |   | DOCUMENT NUMBER | DATE       | NAME           | CLASS | SUB<br>CLASS |
|---------------------|---|-----------------|------------|----------------|-------|--------------|
| AB                  | 1 | 5,558,946       | 09/24/1996 | NISHIMOTO      |       |              |
| AB                  | 2 | 5,510,066       | 04/23/1996 | FINK et al.    |       |              |
| AB                  | 3 | 4,683,146       | 07/28/1987 | HIRAI et al.   |       |              |
| AB                  | 4 | 5,525,434       | 06/11/1996 | NASHIMOTO      |       |              |
| AB                  | 5 | US 6,337,222 B1 | 01/08/2002 | SHIMODA et al. |       |              |

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|----|---|---------------------------------|------------|---------|-------|--------------|
| AB | 6 | JP 05-297407(w/Eng. Abst&Trans) | 11/12/1993 | JAPAN   | A     |              |
| AB | 7 | JP 07-220761(w/Eng. Abst&Trans) | 08/18/1995 | JAPAN   | A     |              |
| AB | 8 | JP 07-101068(w/Eng. Abst&Trans) | 04/18/1995 | JAPAN   | A     |              |
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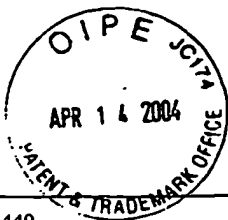
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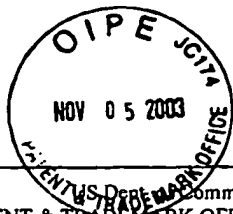
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Sheet 1 of 1

|   |    |   |            |                                       |       |                               |  |
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| U.S. PATENT DOCUMENTS   |    |   |            |                                       |       |                               |  |
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| AS  | 1. | US 6,610,552 B2                                   | 08/26/2003 | FUJIMORI et al.                       |       |                               |  |
| AS  | 2. | US 6,696,785 B2                                   | 02/24/2004 | SHIMODA et al.                        |       |                               |  |
| AS  | 3. | US 2002/0163300 A1                                | 11/07/2002 | DUINEVELD et al.                      |       |                               |  |
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| EXAMINER<br><i>Andrew Klutter</i>   |    |   |            | DATE CONSIDERED<br><i>8/31/04</i>     |       |                               |  |
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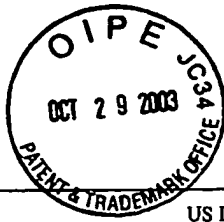
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Sheet 1 of 1

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| Form PTO-1449<br>(REV. 8-83)  |   | U.S. Department of Commerce<br>PATENT & TRADEMARK OFFICE |         | ATTY DOCKET NO.<br>JAO 40499          |       | APPLICATION NO.<br>09/077,029 |  |
| INFORMATION DISCLOSURE STATEMENT<br><br>(Use several sheets if necessary)   |   |  |         | APPLICANT(S)<br>Mutsumi KIMURA et al. |       |                               |  |
|   |   |  |         | FILING DATE<br>May 18, 1998           |       | GROUP<br>2871                 |  |
| U.S. PATENT DOCUMENTS   |   |  |         |                                       |       |                               |  |
| EXAMINER<br>INITIAL   |   | DOCUMENT NUMBER  | DATE    | NAME                                  | CLASS | SUB<br>CLASS                  |  |
| <i>AS</i>   | 1 | 5,202,261  | 04/1993 | MUSHO et al.                          | 435   | 288                           |  |
| <i>AS</i>   | 2 | 5,250,439  | 10/1993 | MUSHO et al.                          | 435   | 25                            |  |
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| EXAMINER<br><i>Andrew Schleuter</i>   |   |  |         | DATE CONSIDERED<br><i>8/21/04</i>     |       |                               |  |
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|---|---|---|---------|---------------------------------------|-------|-------------------------------|--|
| Form PTO-1449<br>(REV. 8-83)  |   | US Dept. of Commerce<br>PATENT & TRADEMARK OFFICE |         | ATTY DOCKET NO.<br>JAO 40499          |       | APPLICATION NO.<br>09/077,029 |  |
| INFORMATION DISCLOSURE STATEMENT<br><br>(Use several sheets if necessary)   |   |   |         | APPLICANT(S)<br>Mutsumi KIMURA et al. |       |                               |  |
|   |   |   |         | FILING DATE<br>May 18, 1998           |       | GROUP<br>2164                 |  |
| U.S. PATENT DOCUMENTS   |   |   |         |                                       |       |                               |  |
| EXAMINER<br>INITIAL   |   | DOCUMENT NUMBER                                   | DATE    | NAME                                  | CLASS | SUB<br>CLASS                  |  |
| <i>AT</i>   | 1 | 5,652,019   | 07/1997 | MORAN                                 | 427   | 226                           |  |
| <i>AT</i>   | 2 | 6,104,311   | 08/2000 | LASTINGER                             | 340   | 825.54                        |  |
| <i>AT</i>   | 3 | 6,153,711   | 11/2000 | TOWNS et al.                          | 526   | 88                            |  |
| <i>AT</i>   | 4 | 6,580,212 B2                                      | 06/2003 | FRIEND                                | 313   | 504                           |  |
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| <i>AT</i>   | 5 | WO 02/18513 A1                                    | 03/2002 | WIPO                                  |       |                               |  |
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Date: October 29, 2003

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| Form PTO-1449<br>(REV. 8-83)  |  | US Dept. of Commerce<br>PATENT & TRADEMARK OFFICE  |          | ATTY DOCKET NO.<br>JAO 40499          |                            | APPLICATION NO.<br>09/077,029 |  |
| INFORMATION DISCLOSURE STATEMENT<br><br>(Use several sheets if necessary)   |  |  |          | APPLICANT(S)<br>Mutsumi KIMURA et al. |                            |                               |  |
|   |  |  |          | FILING DATE<br>May 18, 1998           |                            | GROUP<br>2164                 |  |
| U.S. PATENT DOCUMENTS   |  |  |          |                                       |                            |                               |  |
| EXAMINER<br>INITIAL   |  | DOCUMENT NUMBER  | DATE     | NAME                                  | CLASS                      | SUB<br>CLASS                  |  |
| AT  |  | 5,132,248  | 07/21/92 | DRUMMOND et al.                       |                            |                               |  |
|   |  | 5,214,350  | 05/25/93 | REMEC et al.                          |                            |                               |  |
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| EXAMINER<br><br>Andrew Schutt   |  |  |          |                                       | DATE CONSIDERED<br>8/31/04 |                               |  |
| Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. |  |  |          |                                       |                            |                               |  |

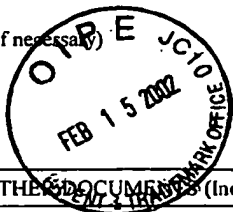
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| INFORMATION DISCLOSURE STATEMENT<br><br>(Use several sheets if necessary)   |  |   |  | APPLICANT(S)<br>Mutsumi KIMURA et al. |  |                               |  |
|   |  |   |  | FILING DATE<br>May 18, 1998           |  | GROUP<br>2164                 |  |
| OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)  |  |   |  |                                       |  |                               |  |
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| EXAMINER  |  | Andrew Seibert  |  |                                       |  | DATE CONSIDERED 8/31/04       |  |
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| Form PTO-1449<br>(REV. 8-83)   |  | US Dept. of Commerce<br>PATENT & TRADEMARK OFFICE |          | ATTY DOCKET NO.<br>jao 40499          |                                | APPLICATION NO.<br>09/077,029 |  |
| INFORMATION DISCLOSURE STATEMENT<br><br>(Use several sheets if necessary)  |  |   |          | APPLICANT(S)<br>Mitsumi KIMURA et al. |                                |                               |  |
|  |  |   |          | FILING DATE<br>September 15, 2000     |                                | GROUP<br>2871                 |  |
| U.S. PATENT DOCUMENTS  |  |   |          |                                       |                                |                               |  |
| EXAMINER<br>INITIAL  |  | DOCUMENT NUMBER                                   | DATE     | NAME                                  | CLASS                          | SUB<br>CLASS                  |  |
| AS   |  | 5,274,481   | 12/28/93 | KIM                                   |                                |                               |  |
| AS   |  | 5,399,390   | 03/21/95 | AKINS                                 |                                |                               |  |
| AS   |  | 3,792,308   | 02/12/74 | OTA                                   |                                |                               |  |
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| FOREIGN PATENT DOCUMENTS   |  |   |          |                                       |                                |                               |  |
|  |  | DOCUMENT NUMBER                                   | DATE     | COUNTRY                               | CLASS                          | SUB<br>CLASS                  |  |
| AS   |  | 3 192334  | 11/19/91 | Japan (and Abstract)                  |                                |                               |  |
| AS   |  | 06 281917   | 02/28/95 | Japan (and Abstract)                  |                                |                               |  |
| AS   |  | 07 134288   | 05/23/95 | Japan (and Abstract)                  |                                |                               |  |
| AS   |  | 03 033824   | 02/14/91 | Japan (and Abstract)                  |                                |                               |  |
| AS   |  | 0 732 868   | 09/18/96 | Europe                                |                                |                               |  |
| AS   |  | 0 717 439   | 06/19/96 | Europe                                |                                |                               |  |
| AS   |  | 196 03 451  | 08/01/96 | Germany                               |                                |                               |  |
| AS   |  | 0 431 249   | 06/12/91 | Eruope                                |                                |                               |  |
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